

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION**

CELLULAR COMMUNICATIONS
EQUIPMENT LLC,

Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD.,
ET AL.,

Defendants.

Civil Action No. 6:14-cv-759-JRG

**PLAINTIFF'S OPENING BRIEF
ON CLAIM CONSTRUCTION**

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	APPLICABLE LAW	2
A.	The claims define the scope of the invention.....	2
B.	Claims are interpreted in light of the intrinsic record	2
C.	Extrinsic evidence may not contradict or limit the claim language.....	3
D.	Special procedures for means-plus-function limitations.....	3
III.	DISPUTED TERMS AND PHRASES.....	4
A.	U.S. Patent No. 8,055,820.....	4
1.	“monitor[ing] a usage of a plurality of buffers” (cl. 1, 12, 24).....	5
B.	U.S. Patent No. 8,645,786.....	7
1.	“self-decodable” (cl. 1, 12)	8
2.	“self-decodable redundancy version” (c. 1, 12).....	10
C.	U.S. Patent No. 8,254,872.....	11
1.	“receiving means for receiving a network identifier of a visited network notified to the terminal when the terminal is registered in the visited network” (cl. 12)	12
2.	“comparison means for comparing the received network identifier of the visited network with a network identifier of a home network of the terminal” (cl. 24).....	16
3.	“connection means for setting up an emergency call connection” (cl. 12).....	18

TABLE OF AUTHORITIES

CASES

<i>3M Innovation Props. Co. v. Tredegar Corp.</i> , 725 F.3d 1315 (Fed. Cir. 2013).....	2
<i>AllVoice Computing PLC v. Nuance Communications, Inc.</i> , 504 F.3d 1236 (Fed. Cir. 2007).....	16, 18, 20
<i>Apple Inc. v. Motorola, Inc.</i> , 757 F.3d 1286 (Fed. Cir. 2014).....	4
<i>Bell Atl. Network Servs., Inc. v. Covad Commc’ns Grp., Inc.</i> , 262 F.3d 1258 (Fed. Cir. 2001).....	2
<i>C4Cast.com, Inc. v. Dell, Inc.</i> , No. 2:12-cv-271, 2013 U.S. Dist. Lexis 93199 (E.D. Tex. Jul. 3, 2013).....	14-15
<i>Digital Biometrics, Inc. v. Identix, Inc.</i> , 149 F.3d 1335 (Fed. Cir. 1998).....	3
<i>In re Katz</i> , 639 F.3d 1303 (Fed. Cir. 2011).....	4, 14
<i>Intel Corp. v. VIA Techs.</i> , 319 F.3d 1357 (Fed. Cir. 2003).....	15, 18, 20
<i>Inventio AG v. Thyssenkrupp Elevator Ams.</i> , 649 F.3d 1350 (Fed. Cir. 2011).....	3
<i>Kara Tech. Inc. v. Stamps.com Inc.</i> , 582 F.3d 1341 (Fed. Cir. 2009).....	3
<i>Med Instrumentation & Diagnostics Corp. v. Elekta AB</i> , 344 F.3d 1205 (Fed. Cir. 2003).....	3
<i>Mobile Telcoms. Techs., LLC v. LG Elecs. Mobilecomm USA, Inc.</i> , No. 2:13-cv-947, 2015 U.S. Dist. LEXIS 62392 (E.D. Tex. May 12, 2015)	14, 18-19
<i>Net MoneyIN Inc. v. VeriSign, Inc.</i> , 545 F.3d 1359 (Fed. Cir. 2008).....	14
<i>Optimize Tech. Solutions v. Staples, Inc.</i> , No. 2:11-cv-419, 2013 U.S. Dist. Lexis 164867 (E.D. Tex. Nov. 20, 2013)	4, 15

<i>Phillips v. AWH Corp.</i> , 415 F.3d 1303 (Fed. Cir. 2005).....	2-3
<i>Power Integrations, Inc. v. Fairchild Semiconductor Int’l, Inc.</i> , 711 F.3d 1348 (Fed. Cir. 2013).....	2
<i>Rexnord Corp. v. Laitram Corp.</i> , 274 F.3d 1336 (Fed. Cir. 2001).....	2
<i>Smartflash LLC v. Apple Inc.</i> , 77 F.Supp.3d 535 (E.D. Tex. 2014).....	12
<i>Smartflash LLC v. Apple Inc.</i> , No. 6:13-cv-00447, Dkt No. 229 (E.D. Tex. Sept. 24, 2014).....	6
<i>Typhoon Touch Techs., Inc. v. Dell, Inc.</i> , 659 F.3d 1376 (Fed. Cir. 2011).....	4, 14-16, 18, 20
<i>Variant Holdings v. Z Resorts LLC</i> , No. 2:11-cv-290, 2013 U.S. Dist. Lexis 67943 (E.D. Tex. May 9, 2013).....	15
<i>Vitronics Corp. v. Conceptiontronic</i> , 90 F.3d 1576 (Fed. Cir. 1996).....	2
<i>WMS Gaming, Inc. v. Int’l Game Tech.</i> , 184 F.3d 1339 (Fed. Cir. 1999).....	4, 14

STATUTE

35 U.S.C. § 112(6).....	2-3, 12, 16, 18-19
-------------------------	--------------------

TABLE OF EXHIBITS

Exhibit	Description
Exhibit A	United States Patent Number 8,055,820
Exhibit B	Excerpted Dictionary Definitions
Exhibit C	United States Patent Number 8,645,786
Exhibit D	United States Patent Number 8,254,872

I. INTRODUCTION

Plaintiff Cellular Communications Equipment LLC (“CCE” or “Plaintiff”) submits this opening claim construction brief addressing U.S. Patent No. 8,055,820 (“the ’820 Patent”), U.S. Patent No. 8,645,786 (“the ’786 Patent”), and U.S. Patent No. 8,254,872 (“the ’872 Patent”).

These patents are part of a broader portfolio acquired from Nokia Siemens Networks (“NSN”) and generally relate to mobile communications. The ’820, ’786, and ’872 Patents have been declared potentially essential to practicing UMTS and/or LTE wireless standards, and cover aspects of implementation and use of those technologies. The accused products are mobile devices, including cellular phones, tablets, and wireless cards.

Twenty-one claim terms are disputed. However, this Court has previously construed certain terms and phrases of the ’820 Patent, as well as U.S. Patent Nos. 7,218,923 and 7,941,174, both of which are asserted in this case. *See CCE, v. HTC Corp.*, Case No. 6:13-cv-507, Memorandum Opinion and Order dated March 9, 2015 (Dkt 363) and Memorandum Opinion and Order dated June 1, 2015 (Dkt 413). Thus, as explained in their Joint Claim Construction and Prehearing Statement, the parties have agreed that the Court’s prior claim constructions concerning seven of the disputed terms should govern here. Dkt 107 at 2-3. For this reason, those seven terms are not addressed below.

Of the fourteen remaining terms in dispute, eleven concern indefiniteness allegations addressed in the parties’ letter briefs. *See* Dkt 112, 121. Of those eleven, three are indisputably governed by 35 U.S.C. ¶ 112(6) and require construction, regardless of Defendants’ indefiniteness allegations. Accordingly, CCE addresses those three means-plus-function terms in this brief, together with the three conventional claim construction disputes raised by Defendants. Pursuant to the parties’ agreement, CCE will respond to Defendants’ other

indefiniteness allegations in its reply claim construction brief (rather than in separate summary judgment briefing) if and when the Court grants Defendants' briefing request. *See* Dkt 104.

II. APPLICABLE LAW

A. The claims define the scope of the invention.

The claims of a patent “define the invention to which the patentee is entitled the right to exclude.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (citation omitted). Consequently, “[c]laim construction begins with the language of the claim.” *Power Integrations, Inc. v. Fairchild Semiconductor Int’l, Inc.*, 711 F.3d 1348, 1360 (Fed. Cir. 2013). Claim terms generally receive their ordinary and customary meaning, which is the meaning that a person of ordinary skill in the art would have understood the claim term to have as of the filing date of the patent application. *Phillips*, 415 F.3d at 1313. “[U]nless compelled to do otherwise, a court will give a claim term the full range of its ordinary meaning as understood by an artisan of ordinary skill.” *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001).

B. Claims are interpreted in light of the intrinsic record.

Notwithstanding the primacy of the claim language, courts interpret claim language “in light of the intrinsic evidence of record, including the written description, the drawings, and the prosecution history.” *Power Integrations*, 711 F.3d at 1360 (citation omitted). The specification can be useful, for example, to “determine whether the inventor has used any terms in a manner inconsistent with their ordinary meaning.” *Vitronics Corp. v. Conceptiontronic*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). Additionally, “[i]diosyncratic language, highly technical terms, or terms coined by the inventor are best understood by reference to the specification.” *3M Innovation Props. Co. v. Tredegar Corp.*, 725 F.3d 1315, 1321 (Fed. Cir. 2013). Although the specification can be a useful guide to how the inventor used a disputed term, “limitations discussed in the specification

may not be read into the claims.” *Id.*; *see also Kara Tech. Inc. v. Stamps.com Inc.*, 582 F.3d 1341, 1348 (Fed. Cir. 2009).

The prosecution history can also inform the meaning of the claim language “because it may contain contemporaneous exchanges between the patent applicant and the PTO about what the claims mean.” *Digital Biometrics, Inc. v. Identix, Inc.*, 149 F.3d 1335, 1344 (Fed. Cir. 1998). The prosecution history, however, cannot be relied upon “to construe the meaning of [a] claim to be narrower than it would otherwise be unless a patentee limited or surrendered claim scope through a clear and unmistakable disavowal.” *3M Innovation Props.*, 725 F.3d at 1322.

C. Extrinsic evidence may not contradict or limit the claim language.

Extrinsic evidence, such as technical dictionaries, may “help educate the court regarding the field of the invention and can help the court determine what a person of ordinary skill in the art would understand claim terms to mean,” but such evidence should be considered in the context of the intrinsic record. *Phillips*, 415 F.3d at 1319. Extrinsic evidence cannot be used to “vary, contradict, expand, or limit the claim language from how it is defined, even by implication, in the specification or file history.” *Bell Atl. Network Servs., Inc. v. Covad Commc’ns Grp., Inc.*, 262 F.3d 1258, 1269 (Fed. Cir. 2001).

D. Special procedures for means-plus-function limitations.

Pursuant to 35 U.S.C. § 112(6), a patentee may elect to express a claim limitation as a means for performing a specified function, without reciting a particular structure. *See Inventio AG v. Thyssenkrupp Elevator Ams.*, 649 F.3d 1350, 1355-56 (Fed. Cir. 2011). Such elements are construed to cover the corresponding structure clearly linked or associated with the claimed function in the specification or file history, and equivalents of those structures. *Med Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1219 (Fed. Cir. 2003).

In some instances, the corresponding structure for a computer-implemented means-plus-function limitation is an algorithm that carries out the claimed function. *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999). Algorithms may be disclosed in any understandable form, though a term may be indefinite if the specification fails to disclose any algorithm. *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1298-99 (Fed. Cir. 2014).

However, an algorithm is not required if the recited function can be achieved by a general-purpose computer without special programming. *In re Katz*, 639 F.3d 1303, 1316 (Fed. Cir. 2011). This “reinforces the self-evident proposition that the required degree of disclosure of corresponding structure is commensurate with the complexity of the claimed function.” *Optimize Tech. Solutions v. Staples, Inc.*, No. 2:11-cv-419, 2013 U.S. Dist. Lexis 164867, *122 (E.D. Tex. Nov. 20, 2013); *Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376, 1385 (Fed. Cir. 2011).

III. DISPUTED TERMS AND PHRASES

A. U.S. Patent No. 8,055,820

The '820 Patent describes a technique for efficiently communicating “buffer status reports” (“BSRs”), which are messages used in certain data networks to schedule uplink communications (i.e., transmissions from a mobile device to the network). *See, e.g.*, Ex. A at 1:21-25; 5:51-58. For example, in LTE networks, a mobile device may transmit a BSR indicating that it has data to send so the network will reserve uplink resources for that data. The '820 patent reduces overhead resulting from these messages and increases network efficiency by using different BSR formats, including “long” and “short” formats, in a particular way. *See id.* at 10:29-44.

To that end, the '820 Patent recites a method, apparatus, and software program capable of

monitoring a usage of a plurality of buffers. *See id.* at 11:9-10; 11:60-61; 13:4. In addition to this “monitoring” functionality, each independent claim further requires detecting a “pre-selected condition” corresponding to the plurality of buffers, designating a long or short buffer status reporting format depending on the pre-selected condition detected, and communicating a BSR in accordance with the format designated. *Id.* at 11:11-20; 11:62-12:6; 13:6-14:8.

1. “monitor[ing] a usage of a plurality of buffers” (cl. 1, 12, 24)

CCE’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary.	“monitoring an act, way, or manner of using a plurality of buffers”

Defendants seek a confined construction of “usage” that deprives the claim of the full scope of its ordinary meaning. The Court has rejected their argument once before. *See CCE v. HTC Corp.*, Case No. 6:13-cv-507, Dkt 413 at 4-7. Nothing has changed, and the Court should affirm its prior holding that “usage” requires no construction.

The specification describes monitoring “usage” of buffers in broad terms, commensurate with the plain claim language. For instance, the Abstract mirrors the claims, describing a device “configured [to] monitor a usage of a plurality of buffers[.]” Ex. A at Abstract. Likewise, the summary of the invention repeatedly refers to “monitoring a usage of a plurality of buffers.” *Id.* at 1:40-41; 2:16-18; 2:56-58; 3:43-45; 4:16-18; 4:37-40. And the detailed description addresses embodiments in which a device is configured to “monitor a usage of the plurality of buffers” or “monitor[] a usage of one or more communication buffers.” *Id.* at 6:1-2; 7:59-60.

Moreover, the patent explains that devices monitor buffer “usage” in order to detect a “pre-selected condition.” For instance, the ’820 Patent states:

In some embodiments, the monitoring unit 210 is configured to monitor a usage of the plurality of buffers 220. In certain embodiments, the monitoring unit 210 and the detecting unit 230 cooperate to enable the detecting unit 230 to detect one of a plurality of pre-selected conditions corresponding to the plurality of buffers. The pre-selected conditions will be discussed in further detail below but may include, for example, any data in one or more buffers [or] data in one or more buffers beyond a pre-selected threshold.

Id. at 6:1-9 (emphasis added). Accordingly, monitoring “usage” is a precursor to detecting a “pre-selected condition” described in the patent. As a result, monitoring “usage” may entail monitoring whether or not data is in one or more of the buffers, or monitoring whether or not the amount of data in the buffers exceeds a pre-determined threshold. *See id.* at 6:1-9; 7:58-63; 10:7-28. Thus, “monitoring a usage of a plurality of buffers” may be accomplished by looking at the buffers to discern whether (or not) the buffers are used or employed. This comports with a broad understanding of “usage,” which should receive its ordinary meaning. *See Smartflash LLC v. Apple Inc.*, C.A. 6:13-cv-00447, Dkt No. 229 at 25-26 (E.D. Tex. Sept. 24, 2014) (“the intrinsic evidence shows that the disputed terms are being used in accordance with their plain and ordinary meaning. Further construing the terms would only lead to confusion instead of clarification.”). Accordingly, “[t]he specification does not limit the definition of ‘usage’ to a particular meaning different from or narrower than the term’s plain meaning.” *CCE v. HTC Corp.*, Case No. 6:13-cv-507, Dkt 413 at at 5.

Defendants reject this and wish to substitute a phrase of their own design — “an act, way, or manner of using” — for clear and unambiguous claim language. Their proposal is ostensibly based on dictionary definitions, but rather than reflecting the broad ordinary meaning of “usage,” it constricts it to exclude dictionary definitions that encompass or relate to the “fact of use.” *See, e.g.,* Ex. B at JOINTDEFS-CCE005227; -5230; -5238; -5246; -5250; -5254; -5257; -5260

(defining “usage” to encompass not only “an act, way, or manner of using,” but also “use,” “employment,” “the fact of being used,” “treatment,” “the action or mode of using,” “the...extent of using,” and “an act...of employing”). As the Court correctly held in *CCE v. HTC*, “the ‘fact of being used’ meaning of ‘usage’ should not be excluded from the meaning of the term.” *CCE v. HTC Corp.*, No. 6:13-cv-507, Dkt 413 at 6.

Indeed, nothing in the specification supports Defendants’ proposed exclusion. *Id.* The specification passage cited for their position (“monitoring 310 buffers may include monitoring a usage of one or more communication buffers”) does not support their argument; rather than distinguishing “monitoring the buffers” from “monitoring the usage of buffers,” it confirms their congruity. There is no evidence that the inventors intended a substantive disparity between “monitoring buffers” and monitoring “usage” of buffers. Rather, the context makes clear that “monitoring 310 buffers” is a truncated phrase *used in a flow chart* to refer to monitoring “usage” of the buffers. Compare Ex. A at Fig. 7 (step 310 “monitoring buffers”) with 7:58-60 (“monitoring 310 buffers may include monitoring a usage of one or more communication buffers”). Defendants’ proposed exclusion hinges on distorting the meaning of this single passage. It is without merit, and should be rejected.

B. U.S. Patent No. 8,645,786

The ’786 Patent describes an improved method for communicating information in a cellular network. In such networks, transmitted information is represented in the form of bit sequences. “Redundancy Versions” (data packets) are generated using “rate matching patterns” which employ algorithms to select encoded bits according to various parameters. Ex. C at 7:61-8:53. Often (due to interference or other factors), information transmitted by a mobile device to a network may not be correctly received. In such circumstances, it may be necessary to re-

transmit the information multiple times. The inventors sought a way to improve the efficiency of this transmission/retransmission process. *See id.* at 2:25-42.

Accordingly, the claims are directed to a particular technique for representing information communicated in transmissions and retransmissions. Initially, information is represented using a first “self-decodable redundancy version” and then transmitted to the network. If the device receives a message that the information was not correctly received (*e.g.*, a “NACK”), it retransmits the information using a second redundancy version, and if the information is still not correctly received, the information is retransmitted again using a third redundancy version. *See id.* at 16:44-17:13.

1. “self-decodable” (cl. 1, 12)

CCE’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary.	“decodable only by itself without considering other data”

In accordance with its plain meaning, the ’786 Patent explains that “self-decodable” relates to how information is represented. Specifically, the specification makes clear that information prepared for transmission may or may not be self-decodable depending on which bits are prioritized during rate matching:

The parameter *s* specifies whether the RV is self decodable, this means decodable if only this RV is considered. Decodable means in this respect, that the information content of the data packet, represented by the redundancy version can be found out. If *s*=1, then when puncturing during rate matching the so called systematic bits are prioritized over the parity bits of the turbo code. Such a redundancy version is typically self decodable, that means, that it can be decoded by itself, unless of course the reception is too noisy. This is not the case when *s*=0 (parity bits are prioritized), where it can happen that a RV cannot be decoded by itself, even in the absence of noise, but only together with an other RV. Therefore the first transmission of a packet should always be self-decodable, i.e. employ *s*=1.

Ex. C at 8:39-52 (emphasis added). When systematic bits (those representing the information/data to be sent) are prioritized during rate matching (triggered when parameter $s = 1$), the output is “self-decodable” and can be “decoded by itself, unless of course the reception is too noisy.” Conversely, when parity bits (those representing redundant bits) are prioritized (triggered when parameter $s = 0$) the output is not “self-decodable.”

Thus, self-decodability relates to how data is represented for transmission. In fact, the specification expressly notes that self-decodable information sent over a network may become distorted during transmission (*e.g.*, due to noise or interference) and thus may no longer be self-decodable when received. *Id.* at 8:45-47 (“Such a redundancy version is typically self decodable, that means, that it can be decoded by itself, unless of course the reception is too noisy.”). Self-decodability is not an absolute quality of transmitted information, but a characteristic describing how information is represented prior to transmission.

Defendants’ proposal reshuffles the term “self-decodable” to “decodable by itself,” then injects negative limitations (“only...without considering other data”) and ambiguity. Indeed, their proposal is strikingly vague; it is unclear what “other data” is forbidden from consideration under Defendants’ proposal, as the claim does not refer to “data” at all. In its broadest sense, “data” could refer to *any* information whatsoever, and Defendants’ construction would seemingly preclude “considering” even information that is inherently necessary to decode whatever was encoded.

Further, Defendants’ proposal is ill-suited to the claim language. Indeed, claim 1 refers to a “self-decodable redundancy version” and a “self decodable rate matching pattern.” While one skilled in the art would readily understand the ordinary meaning of these terms in the context of the claim, substituting Defendants’ proposal for the claim language confounds that ordinary

meaning and, rather than resolving disputes, creates new ones concerning the correct interpretation of a “[decodable only by itself without considering other data] redundancy version” and “[decodable only by itself without considering other data] rate matching pattern.”

Hence, Defendants’ construction is at once unduly narrow and vague. It fails to elucidate the scope of the claims, and it should be rejected.

2. “self-decodable redundancy version” (cl. 1, 12)

CCE’s Proposed Construction	Defendants’ Proposed Construction
“redundancy version”: “one of multiple possible encoded representations of a bit sequence suited for transmission and/or retransmission” “self-decodable”: no construction necessary	“one of multiple possible encoded representations of a bit sequence decodable only by itself without considering other data and suited for transmission/retransmission to ensure correct receipt”

The disputed phrase refers to a “redundancy version” that is “self-decodable.” As explained above, “self-decodable” requires no construction. But setting aside that dispute, the parties disagree on the meaning of “redundancy version.”

CCE’s proposal reflects a compromise (proposed to and rejected by Defendants) to clarify that a “redundancy version” refers to one of multiple encoded representations of a bit sequence. This is consistent with the specification, which explains:

According to the invention a data packet is transmitted from a sender to a receiver. In the data packet information is contained, which is represented by [a] bit sequence. For transmission this bit sequence is transformed into a redundancy version, that is one out of more possible representations suited for transmission.

Ex. C at 2:46-51.

Unsatisfied with this explanation, Defendants seek to further specify that a “redundancy version” must “ensure correct receipt.” But that phrase is not found in the specification and has no place in the claim language. In fact, it contravenes the claim, which expressly contemplates

that information transmitted using a “self-decodable redundancy version” may not be correctly received. In other words, it is because “correct receipt” cannot be “ensured” (i.e., “made certain”) that the claim provides for *retransmission* of information. *See id.* at 16:49-63 (“initially transmitting the information for a first time ... wherein the information is represented by a first, self-decodable redundancy version ... receiving a confirmation confirming an incorrect receipt from the receiver ... retransmitting the information at least one first time in a second data packet ... thereby using a second redundancy version for representation of the information”). To require that a “self-decodable redundancy version” “ensure” correct receipt would disregard the specific problem addressed in the claimed technique.

C. U.S. Patent No. 8,254,872

The '872 Patent describes a technique for simplifying IMS registration in the event of emergency calls. Ex. D at Abstract. Third-generation Partnership Project (3GPP)¹ technical specifications applicable to UMTS and LTE networks set forth procedures for communicating in an IP Multimedia Subsystem (IMS), a packet-based network capable of supporting both data and packet-based voice calls (VoIP). *See, e.g., id.* at 1:13-18. As the '872 Patent explains, emergency calls made over the IMS network require a special registration procedure. *Id.* at 1:21-25. Unfortunately, that registration procedure wastes time in a context where seconds truly matter. *Id.* at 1:44-47, 2:63-3:3. The inventors thus devised a technique to bypass that time-consuming process in certain circumstances. *Id.* at 2:12-39.

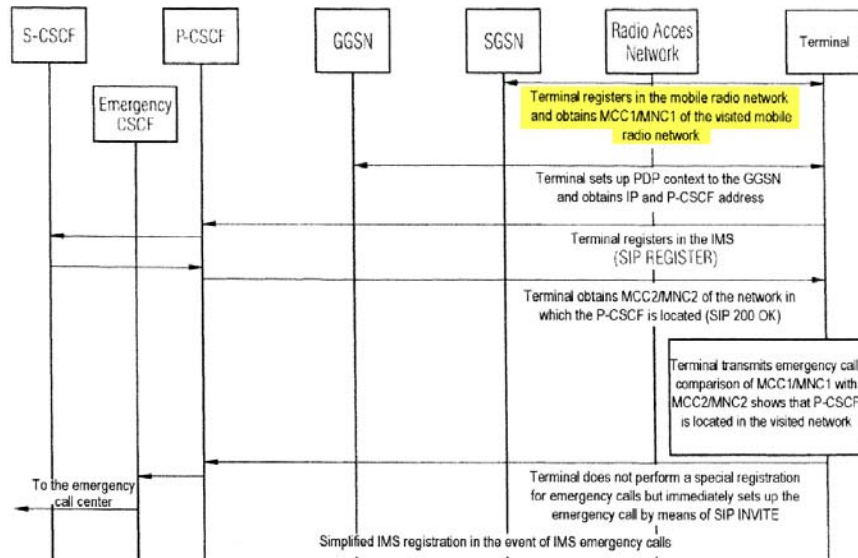
¹ 3GPP is an international collaborative responsible for writing and publishing technical specification and technical reports for GSM, UMTS, and LTE network technologies. *See* <http://www.3gpp.org/about-3gpp>. Each Defendant (or an affiliate of each Defendant) is a 3GPP member.

1. “receiving means for receiving a network identifier of a visited network notified to the terminal when the terminal is registered in the visited network” (cl. 12)

CCE’s Proposed Construction	Defendants’ Proposed Construction
<p>Function: receiving a network identifier of a visited network notified to the terminal when the terminal is registered in the visited network</p> <p>Structure: a mobile terminal (and equivalents). See 1:18-26, 2:12-56, 3:19-42, Fig. 1.</p> <p>Alternatively, should the Court determine an algorithm is required, the structure is: a mobile terminal (1:24, 2:15, 2:21, 2:42, 3:19, Fig. 1) configured to perform one or more of the algorithms set forth in the ’872 Patent at 2:14-33, 2:40-44, 3:19-29, and Fig. 1 (and equivalents).</p>	<p>Indefinite.</p> <p>This is a means-plus-function element to be construed in accordance with 35 U.S.C. § 112, ¶ 6.</p> <p>Function: “receiving a network identifier of a visited network notified to a terminal when the terminal is registered in the visited network”</p> <p>Structure: no corresponding structure disclosed</p>

The parties agree that this term is governed by 35 U.S.C. § 112(6) and the claimed function is “receiving a network identifier of a visited network notified to a terminal when the terminal is registered in the visited network.” Under § 112(6), this claim limitation thus encompasses structure disclosed in the specification, plus any equivalents thereof. *Smartflash LLC v. Apple Inc.*, 77 F. Supp. 3d 535, 540 (E.D. Tex. 2014)

The ’872 Patent clearly states that this function is performed by a terminal in a mobile radio network (i.e., a mobile terminal). This is illustrated in Figure 1, which teaches that a mobile terminal “registers in the mobile radio network and obtains MCC1/MNC1 of the visited mobile radio network:”



As the specification explains, MCC and MNC stand for “Mobile Country Code” and “Mobile Network Code,” respectively, and they together identify a network. Ex. D at 2:14-19. Thus, the highlighted portion of this figure clearly depicts a terminal obtaining (*cf.* “receiving”) an MCC1/MNC1 (a “network identifier”) of the visited mobile radio network when the terminal registers in that network.

The specification further corroborates that disclosure, explaining that the “terminal” of Figure 1 “registers in a mobile radio network and obtains a network identifier (“MCC1/MNC1”) of the mobile radio network visited by it.” *Id.* at 3:19-21; *see also id.* at 3:32-34 (explaining that MCC1/MNC1 is “stored in the terminal after its registration/authentication etc. in the mobile radio network visited by it”). And column 2 describes that a terminal “is informed” of the network identifier of a visited network when it registers with that network:

If the terminal, when registering in the visited network, is informed by the latter about the network identifier of the visited network (in the case of GPRS/UMTS, this information is broadcasted, e.g. by the radio network, in 3GPP WLAN, this information is transmitted to the terminal during the access authentication, in Next Generation Fixed Networks, a similar method could be used as in the case of 3GPP WLAN), it can dispense with the special IMS registration for emergency calls if the terminal is already registered in the IMS and the comparison between

the stored identifier of the home network and the received identifier of the visited network has revealed that both networks are identical, that is to say the terminal is not moving in a foreign network.

Id. at 2:20-33. Indeed, this passage explains how the identifier is received by a terminal in specific network implementations, including UMTS and WLAN.

These disclosures coincide directly with the claimed function, and clearly link that function to a terminal in a terminal in a mobile radio access network. Because the claimed structure is a special-purpose terminal in a mobile network rather than a “general purpose computer,” no algorithm is required. *See Mobile Telcoms. Techs., LLC v. LG Elecs. Mobilecomm USA, Inc.*, No. 2:13-cv-947, 2015 U.S. Dist. LEXIS 62392 at *51-52 (E.D. Tex. May 12, 2015) (“Because the specification links the claimed function to such structures rather than to a general-purpose computer, no algorithm is required”) (citing *Net MoneyIN Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1367 (Fed. Cir. 2008) and *WMS Gaming, Inc. v. Int’l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999)); *see also Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1384-85 (Fed. Cir. 2011) (“[T]he amount of detail that must be included in the specification depends on the subject matter that is described and its role in the invention as a whole, in view of the existing knowledge in the field of the invention”).

Moreover, even if the disclosed structure was merely a general purpose computer, no algorithm is required because the claimed function — “receiving” a network identifier — is so basic that it may be performed without special programming. *See In re Katz*, 639 F.3d 1303, 1316 (Fed. Cir. 2011) (“Absent a possible narrower construction of the terms ‘processing,’ ‘receiving,’ and ‘storing,’... those functions can be achieved by any general purpose computer without special programming. As such, it was not necessary to disclose more structure than the general purpose processor that performs those functions.”); *see also C4Cast.com, Inc. v. Dell*,

Inc., No. 2:12-cv-271, 2013 U.S. Dist. Lexis 93199, *61 (E.D. Tex. Jul. 3, 2013); *Optimize Tech. Solutions v. Staples, Inc.*, No. 2:11-cv-419, 2013 U.S. Dist. Lexis 164867 at *132-133; *C4Cast.com*, 2013 U.S. Dist. Lexis 93199 at *60-62; *Variant Holdings v. Z Resorts LLC*, No. 2:11-cv-290, 2013 U.S. Dist. Lexis 67943 at *116-119 (E.D. Tex. May 9, 2013). This exception to the algorithm requirement “reinforces the self-evident proposition that the required degree of disclosure of corresponding structure is commensurate with the complexity of the claimed function.” *Optimize Tech. Solutions*, 2013 U.S. Dist. Lexis 164867 at *122; *Typhoon Touch Techs.*, 659 F.3d at 1385.

Even more, should the Court find that an algorithm is required, one skilled in the art would understand that the mobile terminal performs the claimed “receiving” function by obtaining a “Mobile Country Code/Mobile Network Code” (“MCC/MNC”) from the mobile network as described in passages cited above, including Figure 1 (“Terminal registers in the mobile network and obtains MCC1/MNC1 of the visited mobile radio network”), 2:14-27 (“...in the case of GPRS/UMTS, [the network identifier of the visited network] is broadcasted, e.g. by the radio network, in 3GPP WLAN, this information is transmitted to the terminal during the access authentication, in Next Generation Fixed Networks, a similar method could be used as in the case of 3GPP WLAN...”), and 3:19-21 (“A terminal ... registers in a mobile radio network and obtains a network identifier (‘MCC1/MNC1’) of the mobile radio network visited by it”).

One skilled in the art would have knowledge of the 3GPP network registration and identification procedures referenced in these passages, and they thus convey sufficient structure to provide an operative software program for the claimed function. *Intel Corp. v. VIA Techs.*, 319 F.3d 1357, 1367 (Fed. Cir. 2003) (“Whether the specification adequately sets forth structure corresponding to the claimed functions must be considered from the perspective of one skilled in

the art”); *Typhoon Touch Techs.*, 659 F.3d at 1385 (“[T]he patent need only disclose sufficient structure for a person of skill in the field to provide an operative software program for the specified function”); *AllVoice Computing PLC v. Nuance Communications, Inc.*, 504 F.3d 1236, 1241-42 (Fed. Cir. 2007) (holding that reference to a known protocol sufficiently disclosed algorithm for corresponding structure).

2. “comparison means for comparing the received network identifier of the visited network with a network identifier of a home network of the terminal” (cl. 24)

CCE’s Proposed Construction	Defendants’ Proposed Construction
<p>Function: comparing the received network identifier of the visited network with a network identifier of a home network of the terminal</p> <p>Structure: a mobile terminal (and equivalents). See 2:21-39, 2:40-56, 3:30-42, Fig. 1.</p> <p>Alternatively, should the Court determine an algorithm is required, the structure is: a mobile terminal (1:24, 2:15, 2:21, 2:42, 3:19, Fig. 1) configured to perform one or more of the algorithms set forth in the ’872 Patent at 2:15-33, 2:40-49, 3:30-38, and Fig. 1 (and equivalents).</p>	<p>Indefinite.</p> <p>This is a means-plus-function element to be construed in accordance with 35 U.S.C. § 112, ¶ 6.</p> <p>Function: “comparing the received network identifier of the visited network with a network identifier of a home network of the terminal”</p> <p>Structure: no corresponding structure disclosed</p>

Again, the parties agree on the applicability of § 112(6) and construction of the claimed function, but disagree regarding the disclosed structure. As with the prior term, the ’872 Patent clearly links a mobile terminal with the claimed “comparing” function. Specifically, the specification explains how a mobile terminal receives, then compares, network identifiers:

If the terminal, when registering in the visited network, is informed by the latter about the network identifier of the visited network (in the case of GPRS/UMTS, this information is broadcasted, e.g. by the radio network, in 3GPP WLAN, this information is transmitted to the terminal during the access authentication, in Next Generation Fixed Networks, a similar method could be used as in the case of 3GPP WLAN), it can dispense with the special IMS registration for emergency calls if the terminal is already registered in the IMS and the comparison between the stored identifier of the home network and the received identifier of the visited

network has revealed that both networks are identical, that is to say the terminal is not moving in a foreign network. Since the subscribers are predominantly located in their home network and the terminal must always be registered in the IMS in order to be “always on”, and thus reachable, this method dispenses in most cases with a special IMS registration for emergency calls with the associated setting-up of a PDP context in the case of GPRS/UMTS.

Ex. D at 2:21-39 (emphasis added).

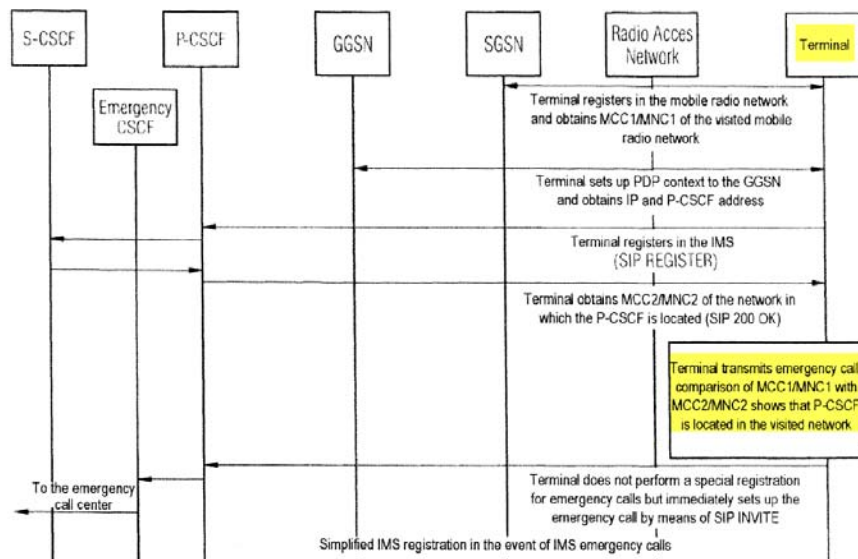
This comparison is also discussed in column 3 of the '872 Patent:

If the terminal should transmit an emergency call later, this is possible, e.g. in the following way: a comparison of the network identifier "MCC1/MNC1" (stored in the terminal after its registration/authentication etc. in the mobile radio network visited by it) of the network visited by the terminal with the network identifier "MCC2/MNC2" of the network in which the P-CSCF is located [typically the home network], reveals that the P-CSCF is located in the network visited by the terminal.

Id. at 3:30-38 (emphasis added); *see also id.* at 1:39-44 (explaining that the P-CSCF is usually located in the home network).

And the “comparison” is clearly performed by a mobile terminal, as illustrated in Figure

1:



Thus, as above, the specification discloses structure — a terminal in a mobile radio access network — clearly linked to the claimed function. Because the claimed structure is a

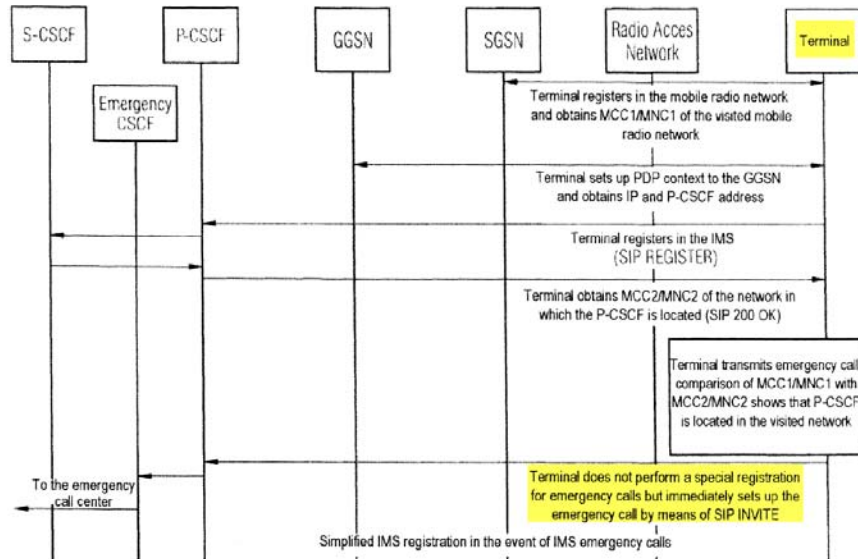
special-purpose mobile terminal rather than a “general purpose computer,” no algorithm is required. *Mobile Telcoms. Techs., LLC*, 2015 U.S. Dist. LEXIS 62392 at *51-52.

However, if an algorithm was required, the ’872 Patent teaches that the claimed “comparing” function is performed by comparing an MCC/MNC of a visited network with an MCC/MNC of a home network, as detailed in Figure 1 and described at 2:30-33 and 3:32-38. Again, one skilled in the art would be familiar with the 3GPP network identifiers and procedures referenced in these passages, and they thus convey sufficient structure to provide an operative software program for the claimed function. *Intel Corp.*, 319 F.3d at 1365-66; *Typhoon Touch Techs.*, 659 F.3d at 1385 (“The amount of detail that must be included in the specification depends on the subject matter that is described and its role in the invention as a whole, in view of the existing knowledge in the field of the invention.”); *AllVoice Computing*, 504 F.3d at 1241-42 (holding that reference to a known protocol sufficiently disclosed algorithm for corresponding structure).

3. “connection means for setting up an emergency call connection” (cl. 12)

CCE’s Proposed Construction	Defendants’ Proposed Construction
<p>Function: setting up the emergency call connection</p> <p>Structure: a mobile terminal (and equivalents). See 1:18-26, 2:12-56, 3:19-42, Fig. 1.</p> <p>Alternatively, should the Court determine an algorithm is required, the structure is: a mobile terminal (1:24, 2:15, 2:21, 2:42, 3:19, Fig. 1) configured to perform one or more of the algorithms set forth in the ’872 Patent at 2:49-52, 3:39-41, and Fig. 1 (and equivalents).</p>	<p>Indefinite.</p> <p>This is a means-plus-function element to be construed in accordance with 35 U.S.C. § 112, ¶ 6.</p> <p>Function: “setting up an emergency call connection”</p> <p>Structure: no corresponding structure disclosed</p>

The parties agree on the applicability of § 112(6) and the claimed function of this element as well. As before, the '872 Patent clearly links this function to a mobile terminal. Figure 2 depicts a terminal “immediately set[ting] up the emergency call by means of a SIP INVITE:”



This plainly corresponds with the claimed function, and is further explained in the specification.

For instance, column 2 notes that “[i]n the case of emergency calls, the terminal can immediately set up the SIP session by means of an SIP INVITE message.” Ex. D at 2:51-52. And column 3 explains that, if the terminal should transmit an emergency call and a comparison of the network identifier of the visited network matches the home network, “the terminal does not perform a special (separate/further) registration for the emergency call desired by it but immediately sets up the emergency call by means of a “SIP INVITE” message. This saves time.” *Id.* at 3:30-42.

Thus, the '872 Patent clearly links a special-purpose mobile terminal (configured for a cellular environment) to “setting up the emergency call connection.” No algorithm is required. *Mobile Telcoms. Techs., LLC*, 2015 U.S. Dist. LEXIS 62392 at *51-52.

Nonetheless, if the Court determines an algorithm is necessary, the '872 Patent teaches that the claimed mobile terminal “set[s] up the emergency call connection” using a SIP INVITE message, as detailed in Figure 1 (“Terminal does not perform a special registration for emergency calls but immediately sets up the emergency call by means of SIP INVITE”), 2:49-52 (“In the case of emergency calls, the terminal can immediately set up the SIP session by means of an SIP INVITE message”), and 3:39-42 (“the terminal does not perform a special (separate/further) registration for the emergency call desired by it but immediately sets up the emergency call by means of a ‘SIP INVITE’ message”).

Because one skilled in the art would be familiar with the SIP protocol, SIP INVITE messages in the context of 3GPP IMS, this conveys sufficient structure to provide an operative software program for the claimed function. *Intel Corp.*, 319 F.3d at 1365-66; *Typhoon Touch Techs.*, 659 F.3d at 1385; *AllVoice Computing*, 504 F.3d at 1241-42 (holding that reference to a known protocol sufficiently disclosed algorithm for corresponding structure).

Dated: **October 23, 2015.**

By:

/s/ Edward R. Nelson III

Edward R. Nelson III

ed@nelbum.com

Texas State Bar No. 00797142

S. Brannon Latimer

brannon@nelbum.com

Texas State Bar No. 24060137

Thomas C. Cecil

tom@nelbum.com

Texas State Bar No. 24069489

NELSON BUMGARDNER P.C.

3131 West 7th Street, Suite 300

Fort Worth, Texas 76107

Phone: (817) 377-9111

Fax: (817) 377-3485

T. John Ward, Jr.

Texas State Bar No. 00794818
J. Wesley Hill
Texas State Bar No. 24032294
Claire Abernathy Henry
Texas State Bar No. 24053063
WARD & SMITH LAW FIRM
P.O. Box 1231
1127 Judson Rd. Ste. 220
Longview, Texas 75606-1231
(903) 757-6400
(903) 757-2323 (fax)
jw@jwfirm.com
wh@wsfirm.com
claire@wsfirm.com

**ATTORNEYS FOR PLAINTIFF
CELLULAR COMMUNICATIONS
EQUIPMENT LLC**

CERTIFICATE OF SERVICE

I hereby certify that on the 23rd day of October, 2015, I electronically filed the foregoing document with the clerk of the Court for the U.S. District Court, Eastern District of Texas, Tyler Division, using the Court's electronic case filing system. The electronic case filing system sent a "Notice of Electronic Filing" to the attorneys of record who have consented in writing to accept this Notice as service of this document by electronic means.

/s/ Edward R. Nelson III